



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/707,521	11/06/2000	Amelia C. Luna	SONY-50P3845	9729

7590 11/10/2003

Wagner Murabito & Hao LLP  
Two North Market Street Third Floor  
San Jose, CA 95113

EXAMINER

REKSTAD, ERICK J

ART UNIT PAPER NUMBER

2613

DATE MAILED: 11/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/707,521

Applicant(s)

LUNA ET AL.

Examiner

Erick Rekstad

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1, 2, 3, 6, 10, 11, 12, 15, 18, 19, 20 and 22 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by US Patent 6,172,621 to Iwata.  
[claims 1, 6, 10, 15, 18, 20, and 22]

Iwata describes a method, computer-readable medium, and apparatus for processing digital video data for displaying said method comprising the steps of:

a) preparsing (deframing S131) said digital data to recover a decoding order of said digital video data (Col 1 Lines 61-65, Fig. 6).

b) decoding a variable length coding format (VLD S132) of said digital video data (Col 3 Lines 60-65, Fig. 6).

c) moving said digital video data (note line between VLD and Inverse Quantization unit is a repeating data path in Fig. 5) that has been processed by said step b.

d) decompressing (IDCT and Inverse weighting S134) said digital video data to facilitate displaying said digital video data on an electronic display device (Col 2 Lines 1-14, Fig. 6).

e) de-shuffling said digital video data to form a frame of said digital video data (Col 4 Lines 3-4, Fig. 6  
[claims 2, 3, 11, 12, 19]

The digital video data is processed as a continues pipeline. While one unit is processing a first plurality of said digital video data a second unit is processing a second plurality of said digital video data (Col 4 Lines 7-12).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7, 8, 9, 16, 17, 28, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwata in view of US Patent 6,389,171 to Washington.  
[claims 7,8,9,16,17,28 and 29]

Iwata teaches the use of a digital video data decoder. Iwata does not specifically teach that the digital video data is mpeg or DV. Iwata also does not teach the use of

Huffman code format for the encoded digital video data. Washington teaches that mpeg and DV are well know digital data formats that use Huffman coding to encode digital data in an ever smaller space in efforts to make digital cameras and digital camcorders more attractive for the users (Col 1 Lines 32-38, Lines 57-67). It would be obvious to one skilled in the art at the time of the invention to use mpeg, DV, and Huffman with lwata's decoder in order to provide a decoder for the increasingly popular encoding techniques used in digital camcorders, as taught by Washington.

Claims 21, 23, 24, 25, 26, 30, 31, 32, 33, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over lwata in view of US Patent 5,363,097 to Jan.  
[claims 21, 23, 24, 25, 26, 30, 31, 32, 33, and 34]

lwata teaches the use of a digital video decoder containing a preparser, vld, and a de-shuffler. lwata does not teach the use of a two way buffering between each stage of the decoding process. Jan teaches the use of a controlled data buffer for reading and writing data between the different stages of the decoding process in order to satisfy a system data rate(Col 5 Lines 58-68, Col 6 Lines 1-10, Fig. 3-5). Though Jan does not specifically say that the buffer controller is DMA, DMA is well know in the art. It would be obvious to one skilled in the art at the time of the invention to combine lwata's video decoder with the buffer system of Jan in order to satisfy a system's data rate requirements.

Claims 36 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over lwata and Jan as applied to claim 30 above, and further in view of Washington.

[claims 36 and 37]

Iwata and Jan teach the use of a digital video data decoder comprising a first memory buffer, a processor, a variable length decoding unit (VLD), and a second memory buffer. Iwata and Jan do not teach the use of the digital data in the DV format. Iwata does not teach the use of Huffman code format. Jan teaches the use of Huffman coding in a VLD in order to generate a fixed-length code word (Col 5 Lines 46-51). Washington teaches that mpeg and DV are well know digital data formats that use Huffman coding to encode digital data in an ever smaller space in efforts to make digital cameras and digital camcorders more attractive for the users (Col 1 Lines 32-38, Lines 57-67). It would be obvious to one skilled in the art at the time of the invention to use mpeg, DV, and Huffman with decoder of Iwata and Jan in order to provide a decoder for the increasingly popular encoding techniques used in digital camcorders, as taught by Washington.

Claims 4, 5, 13, 14, 27 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwata in view of US Patent 6,496,199 to Peng et al.

[claims

4, 5, 13, 14, 27 and 35]

Iwata teaches the use of a digital video decoder containing a preparser, vld, and a de-shuffler. Iwata does not teach the use of a Very Long Instruction Word (VLIW) processor. Peng teaches the use of a VLIW CPU to control a system-on-a-chip video decoder in order to implement an advanced multimedia system at an affordable cost and with a smaller footprint (Col 1 Lines 50-55, Lines 59-63). The VLIW CPU contains

an on-chip instruction cache that could obviously be used to store instructions on preparsing video data. The steps of the decoder are obviously controlled under time sharing criteria because a real-time digital video decoder is required to perform the decoding steps in a specific amount of time. It would be obvious to one skilled in the art at the time of the invention to combine the decoding method of Iwata with the system of Peng in order to produce an affordable and small advanced multimedia system.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent 5,844,575 to Reid.

US Patent 6,233,277 to Ozcelik et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erick Rekstad whose telephone number is 703-305-5543. The examiner can normally be reached on 8-5.

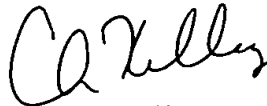
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on 703-305-4856. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Application/Control Number: 09/707,521  
Art Unit: 2613

Page 7

Erick Rekstad  
Examiner  
AU 2613  
(703) 305-5543  
erick.rekstad@uspto.gov

  
CHRIS KELLEY  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600